Generating a Business Model Canvas through Elicitation of Business Goals and Rules from Process-Level Use Cases

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Abstract. Business Models play a pivotal role in organizations, especially in building bridges and enabling the dialogue between business and technological worlds. Complementarily, while Use Cases are one of the most popular techniques for eliciting requirements in the design of Information Systems, Business Goals and Business Rules associate with Business Process Use Cases to compose a Business Model base structure. However, methods for relating Business Processes, Goals and Rules (PGR) are scarce, dissonant or highly analyst-dependent. In this sense, we propose a two-step method to help in guiding the elicitation of Business Goals and Rules from Process-level Use Cases, and their mapping to a Business Model representation. As a result, a solution Business Model generated by aligning the resulting trios (PGR) with a Business Model Canvas is presented to the organization stakeholders for review, validation and further negotiation.

Keywords: Business Model, Business Goals, Business Rules, Business Use Cases, Requirements Elicitation.

1 Introduction

Business Models play an ever more pivotal role in the development and continued management of Information Systems (IS). Nevertheless, recent literature review on Business Models (BM) results show that there is no agreement on what a BM is, although some emerging common themes already exist [1]. The BM artifact, as a conceptual tool that contains a set of elements and their relationships, expressing the business logic of a specific firm and the value it offers, is seen as crucial for improving the Business-IS/IT dialogue. Although it has had substantial attention from both academics and practitioners, its growing associated literature is still young and dispersed.

Our recent work in generating a BM in ill-defined contexts, within a RUP-based approach and grounded on reference model representations, stands as a contribution
inside this topic [2]. The use of Process-level Use Cases, together with Business Goals and Rules associated information (PGR), allows developing an activity direct-mapped BM to present to stakeholders for validation. The use and adaptation of ‘standard’ methods and techniques to infer goals and rules requirements from scenarios and process-like diagrams, mapping backwardly the traditional business to process workflow, could also allow for better and continuous alignment between Business and IS/IT, with improved traceability.

Accordingly, the knowledge represented in terms of goals, rules and methods can make reengineering tasks more systematic and effective [3]. Whether it involves the development of a new system or the reengineering of business processes, decisions about what goals to pursue and on selecting the appropriate strategies to achieve them are always vital. The discovery of goals and rules is part of requirements elicitation, recognized as one of the most critical activities of software development, with many prescribed methods and techniques.

However, it is virtually impossible to define a unified model for the elicitation process, due to the constantly changing needs associated to requirements activities. Even if specific methodologies, broken down into multiple steps, describe general approaches and overall principles to assist analysts in understanding needs, only the experienced analyst understands intuitively which method or technique is effective, in each circumstance, and is able to apply it [4]. This raises issues as lack of formality, analyst dependency and difficulties for less experienced analysts, all added to the Business-IS/IT dialogue gap.

Our approach tries to obviate to these, presenting a method, to guide the analyst in the elicitation of Business Goals and Rules from Process-level Use Cases, and transforming them, in order to arrive at a BM representation. This later can then be presented to the involved stakeholders for review, validation and further negotiation. As the entire method follows a model-based approach, the changes agreed upon could be traced back to the original Use Cases, allowing for requirements traceability and a Business-IS/IT aligned solution.

This document follows with a background research review on Business Model representations and on diverse methods, techniques and guidelines for the elicitation of Business Goals and Rules. Then, we present our proposed two-step method, covering the elicitation of Business Goals and Rules from Process-level Use Cases, and their mapping to a BM representation, resulting in a generated BM aligning our PGR trios with the original Use Cases. Next we apply and demonstrate it in a live project setting. Consequently, an analysis of the results obtained and future work directions are discussed in section 5. Finally, some conclusions are drawn for this paper.

2 Related Research

This section presents related research regarding Business Model representations, and Business Goals and Rules elicitation approaches. For the BM topic, it focuses solely on the Business Model Canvas (BMC) [5] and its early connection with the Balanced